IEEE P802.11
Wireless LANs

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| D0.1 Comment Resolution – CID 809 |
| Date: 2011-05-03 |
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##### Baseline is 11ac D0.3 document.

##### This document proposes resolution for the following CIDs:

##### COEX: 809.

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| 809 | Loc, Peter | 9.2.0b.7  | 45 | 61-65 | TR | To meet the rule of this sub-clause, that "the VHT STA addressed by the RTS frame shall respond with a non-HT or non-HT duplicate CTS frame over all channels that are specified by the INDICATED\_CH\_BANDWIDTH parameter of the RTS frame if all non-primary channels indicated by the RTS frame have met the following condition: the PHY-CCA.indication primitive indicates IDLE during an interval of PIFS before the RTS frame is received. A VHT STA that is addressed by the RTS frame shall not respond with a CTS frame if the condition is not met for any nonprimary channel indicated by the RTS frame".it requires that all active STAs must constantly compute their CCA IDLE time for non-primary channels. However, since most packets the STAs receive are data packets, not RTS, their cycles and power spent on computing the CCA IDLE count are wasted, resulting in more power consumption at the STAs. | Add the following paragraph after line 4, page 46: "To save processing cycles at the STAs, a secondary CCA IDLE Count Request frame (SCR) is used to alert STAs of an incoming RTS. SCR frame is transmitted in the primary channel PIFS before the transmission of RTS. STAs receiving SCR will turn on their CCA detecting blocks and begin counting their IDLE time. SCR frame contains SU or MU indication and address of the target STA/STA group. | COEX |

**Proposed resolution:** Disagree. One potential implementation is that the RTS receiver evaluates all non-primary channels continuously and stores the CCA state upon packet reception. However, a receiver can devise more simple and efficient algorithms for early-packet or mid-packet detection for non-primary channels. Please see algorithms and discussions on early- and mid-packet detection in 07/3001r2, 10/0012r0, 10/0744r1. Also, while the CCA IDLE count needs to be executed all the time, it has low complexity.

**Discussion:** The commenter suggests that the RTS receiver needs to evaluate all non-primary channels contentiously. As discussed in TGac (see 07/3001r2, 10/0012r0, 10/0744r1), a receiver can devise simple and efficient algorithms for early-packet or mid-packet detection for non-primary channels. With additional control frame exchange, as suggested by the commenter, multiple concerns arise among which are additional complexity, additional degradation of MAC efficiency, and introduction of a new control frame (sent prior to RTS which is) unknown to legacy devices.